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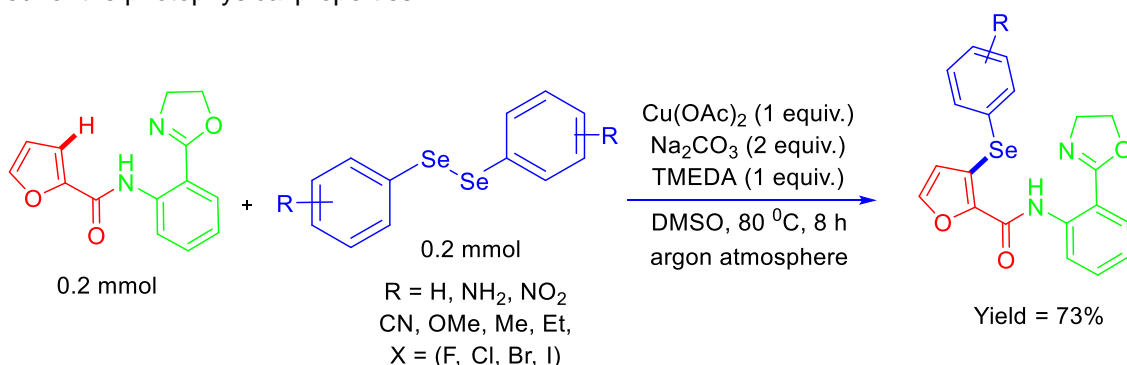
## Copper Catalyzed Direct Chalcogenylation of Chalcogenophenes C(sp<sup>2</sup>)-H Bonds Using a 2-Amino Oxazole Directing Group

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### ABSTRACT

In recent decades, organoselenides with potential pharmaceutical uses have been identified. Many others have demonstrated bioactivities for various applications, including agricultural chemicals and fluorescent probes for bioimaging.<sup>1</sup> Recent advancements in transition metal-catalyzed direct chalcogenylations via C-H activation using directing groups have created a dynamic field.<sup>2</sup> The importance of the given methodology of direct chalcogenylations via C-H activation for the synthesis of organoselenides, different aryl and heteroaryl chalcogens compounds using copper acetate as catalyst and 2-(4,5-dihydrooxazol-2-yl)amides as directing group was prepared. Under the best optimized condition, it provides 73% yield. The reaction scope will be further elaborate by using different heterocyclic substrates and diphenyl diselenides. Including electron donating and withdrawing groups. Initially the compounds also showed fluorescence emission under UV in the violet to blue region that can be further elaborated for fluorescence study. The compounds will be further analyzed for the photophysical properties.



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